

DPO-1237-61

24 February 1961

MEMORANDUM FOR : Assistant Chief, DPD-DD/P

SUBJECT : H-34A - S-62 Comparison

1. The Sikorsky built H-34A is a single reciprocating engine helicopter with a single lifting rotor and a single anti-torque tail rotor. The engine is mounted in the nose of the vehicle. Easy access to the engine compartment is provided through clam-shell type nose doors. A cargo sling is available for externally transporting up to 4,000 pounds of bulky equipment. The vehicle has a fuel capacity of 262 gallons of aviation gasoline and can carry a maximum of 5,268 pounds of payload (this 5,268 includes fuel and crew). Maximum gross weight is 13,000 pounds and the helicopter can hover at an altitude of 3,000 feet at this gross weight. The H-34A can haul 3,296 pounds a distance of 245 nautical miles and has a ferry range capability of 370 miles. Average speed for the ferry mission is 94 knots at an altitude of 5,000 feet.

2. The S-62 built by Sikorsky is powered by a single G. E. turbine engine mounted on top of the fuselage. The helicopter employs a single lifting rotor and a single anti-torque tail rotor. The S-62 is an amphibious configured helicopter thus offering an operational capability of wide diversification potential. An external cargo sling is available for transporting up to 2,500 pounds of bulky cargo. Normal fuel capacity is 132 gallons of JP-4 fuel with provisions for 62 gallons of auxiliary fuel. Maximum gross weight is 7,500 pounds. Maximum payload, including crew and fuel, is 2,900 pounds. With full fuel, the S-62 can transport 1,717 pounds of payload a distance of 212 miles. Utilizing auxiliary fuel, the S-62 can carry 800 pounds of cargo 334 miles. This helicopter has a ferry range of 212 miles with normal fuel supply and 334 miles with augmented fuel. At the maximum gross weight of 7,500 pounds, the S-62 can hover at 15,500.

3. Comparatively, the S-62 offers a much greater mission flexibility potential due to the amphibious configuration. The turbine engine permits the S-62 to maintain its lifting capability to a higher altitude having a service ceiling of 15,500 feet at its maximum gross weight of 7,500 pounds. The H-34A service ceiling is 10,500 feet at 13,000 pounds gross weight. However, when the H-34A is loaded with an equal payload of the S-62 (2,900 payload), the reduced weight service ceiling of the H-34A is 16,000 feet. For any given loading

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condition of useful payload, the H-34A offers a greater range capability. The payload capabilities can be briefly summed as follows:

	<u>H-34A</u>	<u>S-62</u>
a. Gross weight	13,000	7,500
b. Basic weight	<u>7,732</u>	<u>4,600</u>
c. Max. payload	5,268	2,900
d. Fuel	<u>1,572</u>	<u>1,182</u>
e. Useful payload	3,696	1,717
f. Pilot and copilot	<u>400</u>	<u>400</u>
g. Cargo weight	<u>3,296</u>	<u>1,317</u>

A more detailed comparative breakdown is included as Attachment 1.

4. No cost figures are available for procurement and/or operation of the H-34A. Helicopter production was completed in January 1959 and vehicles in the field should be readily available for transfer. Production cost of the S-62 is quoted at \$210,000 plus engine, plus approximately \$50,000 of desirable equipment for mission accomplishment. Delivery can be made approximately four months after date of order. Spares for one year of operation are estimated at 15%, with engine spares placed at 25%. Insufficient data are available to suitably compare the S-62 proposal at this time. Cost figures for the 3 are some \$25,000 greater than the S-62, and delivery time is increased to ten or twelve months.

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Attachments:

As cited

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